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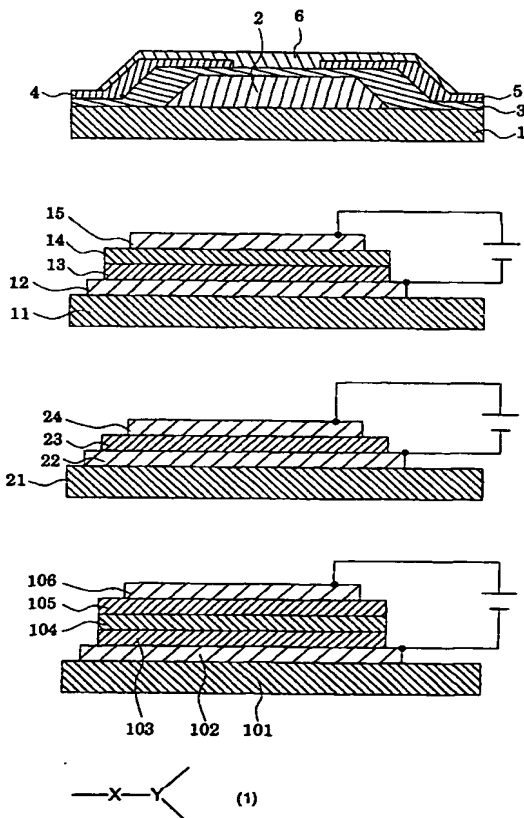
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(54) Title: DENDRITIC POLYMER AND ELECTRONIC DEVICE ELEMENT EMPLOYING THE POLYMER



(57) Abstract: An object of the invention is to provide a novel dendritic polymer serving as an organic semiconductor material which is isotropic and which exhibits remarkably high carrier conductivity. Another object of the invention is to provide an electronic device employing the dendritic polymer. These objects are attained by a dendritic polymer having a branching structure including repeating units each having a branch portion, each of said repeating units having a structure represented by formula (1), and containing a linear portion X formed of an optionally substituted divalent organic group and a branch portion Y formed of an optionally substituted trivalent organic group: characterized in that the linear portion X contains at least one thienylene moiety and is at least partially conjugated with the branch portion Y, and in that the polymer reversibly assumes an insulative state and a metallic state, depending on the presence of an external factor.

**WO 2004/009680 A3**



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

# INTERNATIONAL SEARCH REPORT

Application No

PCT/JP 03/08899

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 C08G83/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, CHEM ABS Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 07, 31 July 1997 (1997-07-31) & JP 09 059355 A (AGENCY OF IND SCIENCE & TECHNOL; STANLEY ELECTRIC CO LTD), 4 March 1997 (1997-03-04) cited in the application abstract	1-15
A	WO 99 21935 A (SAMUEL IFOR DAVID WILLIAM ; HALIM MOUNIR (GB); ISIS INNOVATION (GB)) 6 May 1999 (1999-05-06) claims 1-37  -/--	1-20

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	LUO J ET AL: "Synthesis, Light Emission, and Optical Limiting of Hyperbranched Poly(Phenylene-alt-(2,5-Thienylene)s!" POLYMER PREPRINTS, vol. 42, no. 2, 2001, pages 527-528, XP009020396 the whole document	1-15
A	ESFAND R ET AL: "POLY(AMIDOAMINE) (PAMAM) DENDRIMERS: FROM BIOMIMICRY TO DRUG DELIVERY AND BIOMEDICAL APPLICATIONS" DRUG DISCOVERY TODAY, ELSEVIER SCIENCE LTD, GB, vol. 6, no. 8, April 2001 (2001-04), pages 427-436, XP001029831 ISSN: 1359-6446 figure 1	1-15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

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